What is claimed is:

1. A laser scanning microscope comprising: at least one selectively switchable micro-mirror arrangement in at least one of the illumination beam path and detection beam path which is used for the wavelength selection of at least one of dispersively divided illumination and object light such as reflection, fluorescence.

359/389 2. A combination comprising: at least one micro-mirror arrangement with at least one dispersion element for wavelength-selective coupling in of illumination light in the direction of the object and wavelength-selective coupling out of object light in the direction of ~~detection in a microscope.~~

3. A method of using the combination as in claim 2 comprising the step of using said combination in a laser scanning microscope.

4. An arrangement according to claim 1 further comprising at least one grating and prism as dispersive element.

359/385 5. In a laser scanning microscope, an arrangement of a micro-mirror arrangement for use instead of a confocal pinhole diaphragm in the detection beam path.

359/368 6. In a laser scanning microscope, an arrangement of an LCD arrangement for use instead of a confocal pinhole diaphragm in the detection beam path.

7 An optical connection of an arrangement according to claim 1, the detection beam path comprising dichroic beam splitters for splitting the detection beam path into individual channels.

8. The arrangement according to claim 7, wherein the optical connection is carried out via light-conducting fibers.

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9. In a laser scanning microscope with slit-shaped scanning in at least one direction comprising:

at least one switchable micro-mirror arrangement; and

means for switching said at least one switchable micro-mirror arrangement to provide said slit-shaped scanning.

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10. In a laser microscope, a combination comprising at least one dispersive element with a selectively-switchable transmission diaphragm in a detection beam path.